

**THE IMPACT OF SPINAL CORD INJURIES
ON INTIMATE RELATIONSHIPS**

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The Impact of Spinal Cord Injuries on Intimate Relationships

This research investigated the impact that spinal cord injuries have upon intimate relationships, and the effect that being in an intimate relationship has upon a person with a spinal cord injury. 25 participants, who had been disabled at least two years, were interviewed in their own homes. 17 participants were in relationships when they were injured, and 16 were in relationships when they were interviewed. Seven of these pre-injury relationships ended within one year post-injury, and the six remaining relationships were still in place at the time of the interviews. Results showed that people with lower levels of impairment were more likely to be depressed, as were those who received assistance with activities of daily living from their partners. Results are discussed using evolutionary, equity, and social support theories, as well as the interpersonal exchange model of sexual satisfaction. Relationship counselling is recommended for couples after one partner has a spinal cord injury.

1. INTRODUCTION

1.1 General Introduction

There is an old adage that only two things in life are certain: death and taxes. Close behind these certainties must be the probability that you, or someone close to you, will experience some form of disability during your lifetime. The 1996 Household Disability Survey and the 1997 Disability Survey of Residential Facilities found that 20% of New Zealanders reported some level of disability. In this country 67% of adults with disabilities living in households and 92% of those living in residential facilities have physical disabilities (Statistics New Zealand, 1998).

Over the last quarter of a century an average of 25 people per million of population sustained a spinal cord injury (SCI) each year in New Zealand. This compares with a rate of 18 per million in Australia and 40 per million in the United States of America. (Hirst, 2000).

This equates to a rate of nearly 100 new spinal cord injuries in New Zealand each year, and raises many questions, not the least of which is what impact does this have on the injured person and their loved ones? This research focuses on the impact that spinal cord injuries have upon one of the most important aspects of peoples lives, their intimate relationships.

1.2 Spinal Cord Injuries and Intimate Relationships.

Research into the impact that a spinal cord injury has upon a person's intimate relationships has produced variable results. The reported percentages of marriages among people with spinal cord injuries has varied widely, ranging from 6% in some studies to 80% in others (Kreuter, 2000) .

For people with spinal cord injuries who are in relationships when they are injured, there appears to be an initial danger period for separation of three years, after which rates get closer to the general population (Kreuter, 2000). Heinemann (1995) found that 81% of couples stayed married five years after the injury, compared to 88% for the general population. For marriages that started after one partner experienced a spinal cord injury, 56% remained intact after 8 years, while the survival rate among marriages without a disabled partner was 77%.

Simmons and Ball (1984) investigated 32 couples in which the husband had experienced a spinal cord injury. They found that, when marriages occurred after the injuries, both husbands and wives had better marital adjustment than spouses married before the injuries.

Collins, Taylor & Skokan (1990) studied the effect that becoming a victim has on people with cancer. They suggest that while there may be an initial negative reaction following an event such as a diagnosis of cancer or a spinal cord injury, the process of

copied necessitates a change in the person's daily activities or priorities. The result is that relationships should become more positive following the traumatic event. This would suggest that relationships that survive past the initial period of negative reaction should have a greater chance of survival than relationships that began after the spinal cord injury occurred. This is supported by the statistics reported by Heinemann (1995), mentioned above.

Holicky and Charlifue (1999) investigated the effect of spousal support upon people with spinal cord injuries as they age. They found that married individuals scored better than their non-married peers on measures of depression, life satisfaction, psychological well-being and perceived quality of life. So, although marriages that occur after a spinal injury may have a greater survival rate than pre-existing marriages, it appears that all married people with spinal cord injuries benefit on a range of measures.

1.3 The Impact Upon the Partner.

Research has also focussed on the impact that a spinal cord injury has on an able-bodied relationship partner. Miller, Houston, & Goodman (1994) found that the impact of a spinal cord injury on the disabled persons' spouse was sadly neglected during the post-injury rehabilitation phase. They found that assistance needs to be provided to the spouse to help them cope with the stress resulting from their partner's injury, as well as the changing needs of both partners in the relationship.

Research has focussed on the emotional reactions that occur among patient's family during the acute-care period immediately following a spinal cord injury. Weller & Miller (1977, part 1) reported that most patients experienced some or all of the following emotional reactions to SCI: shock, denial, anger and depression. They found that family members often experienced the same reactions (Weller & Miller, 1997, part 2).

Research has shown that acting as a caregiver for a disabled spouse had a negative impact on the able-bodied partner. Weitzenkamp, Gerhart, Charifue, Whiteneck, & Savic (1997) found that spouses in a caregiving role evidenced more symptoms of stress, depression and fatigue than their partners, and compared to spouses of people with spinal cord injuries who weren't caregivers.

1.4 The Impact Upon The Relationship.

In a wide ranging study Parker (1993) interviewed 21 married couples where one partner acquired a disability after the marriage, and the other partner was the primary care-giver for the disabled spouse. Through qualitative research she investigated the impact of the disability on aspects such as each partner's role in the relationship, their sexual relations, and each partner's perception of the nature and meaning of marriage. Of the 22 disabling conditions investigated only 2 remained stable over time, with the remainder deteriorating at varying rates. However, none of the participants in Parkers

study were disabled as a result of spinal cord injuries, and only marriages that remained intact were included in this research.

Parker found that the nature of each couple's marriage could be related to several factors. The quality of the relationship prior to the injury was a strong predictor of marital satisfaction post-injury. Those couples that reported that they had not always had strong relationships were the least happy at the time of their interviews. In other cases the marriage survived apparently because the non-injured spouse believed he or she had a duty towards his or her disabled partner, or felt that remaining in the relationship was the right thing to do. The severity of the disability was also a factor, as more strain was likely in cases where the non-disabled partner provided a substantial amount of care. As time since the onset of the disability increased, so did the strength of the relationship, perhaps because couples adjusted to the altered marital relationship. Finally, Parker found that practical considerations such as financial constraints and accommodation factors also placed strains on the relationship.

As Parker's research covered a number of disabilities it was decided to readdress some of her findings concentrating on a specific disability, that is, spinal cord injuries. It was predicted that, in accordance with Parker's results, participants who receive more assistance with activities of daily living from their partners will have less relationship satisfaction and more depression than other participants.

1.5 Attachment Styles.

Attachment styles were first discussed by Bowlby in 1969, who found that infants who are separated from their primary caregivers go through three distinct phases – protest, despair and detachment. That is, when left alone infants first cry out, then become silent and withdrawn, and finally act as if they don't care that their caregiver abandoned them:

Ainsworth expanded on this research by having mothers leave their infants in a room with a stranger and observing the infants reactions, both in the mother's absence and after she returned (the so-called laboratory strange situation). Ainsworth found that infants could be divided into three distinct categories: secure, avoidant and ambivalent. Securely attached infants protested when their caregivers left the room but soon resumed playing with the toys that were provided, and sought comfort when their mothers returned. Avoidant infants paid little attention to their caregivers, regardless of whether they were in the room or absent. Ambivalent infants were distressed throughout their mother's absence, and were difficult to comfort when she returned (Bretherton, 1992).

She also found that infant's attachment styles were related to the caregiving style of the primary caregiver. Secure infants had supportive and reliable parents. Mothers of avoidant children were cold and unsupportive, and caregivers of ambivalent infants gave their children mixed messages. That is, they were warm and supportive at times, but could also be cold or angry at other times.

Attachment theory can also be applied to adult relationships (Hazan & Shaver, 1987). However, it has been found that, rather than the three distinct categories of attachment previously proposed, attachment styles lie along two dimensions: Secure verses avoidant, and high ambivalence verses low ambivalence (Fletcher, in press). For the purposes of this research, these are referred to as secure and anxious attachment styles.

In most western countries approximately 60% of the population have a secure attachment style. However, attachment styles are dynamic and may change several times throughout ones life due to external factors, such as relationship histories (Fletcher, in press). A spinal cord injury has been shown to reduce the number of relationship opportunities for the disabled person, and is certainly a stressful event over a long period. In this study I predicted that those with a more secure style would be more likely to be in relationships, to cope better with their injuries, and be happier with their relationships (if they were in one). These participants were also expected to be satisfied with their sexual relationship, and to believe that achieving orgasm is not so important during sexual relations. In contrast, I expected that those who were more anxious would be less likely to be in relationships, would not cope as well with their injuries and would be less satisfied with their relationships. Participants with a more anxious attachment style were expected to be more dissatisfied with their sexual relationship, and to believe that orgasms are an important part of sexual relations.

1.6 Sexual Satisfaction.

Kreuter, Sullivan and Siosteen (1996) looked at sexual adjustment following a spinal cord injury. They found that although sexual activity and satisfaction were lower for people with spinal injuries than for a matched control group, there was no difference in emotional satisfaction with the overall relationship between the two samples. In an earlier study, Kreuter, Sullivan and Siosteen (1994) found that 45% of partners of people with spinal cord injuries considered their current sex life to be as good or better than their previous sex lives.

The Interpersonal Exchange Model of Sexual Satisfaction (Lawrence & Beyers, 1995) proposes that sexual satisfaction is a function of rewards and costs from a sexual relationship. According to this model satisfaction is greater if rewards exceed costs, relative reward levels exceed relative cost levels, and an interpersonal equality of rewards and costs is seen to exist. This model would suggest that when one partner has a disability resulting in a decrease in sexual functioning, especially the inability to achieve orgasm, an inequality in interpersonal rewards would exist during sexual relations. It is predicted that, in accordance with this model, participants will be dissatisfied with their sexual relationship.

1.7 The Present Research.

This purpose of this study was to expand upon the work began by Parker (1993). That is, to investigate the impact that a spinal cord injury has upon intimate relationships, along with the impact that an intimate relationship has upon the person with the spinal cord injury. All intimate relationships were considered, regardless of whether they began before or after the spinal injury occurred.

This research compared people with spinal injuries who were in relationships with those who were not, focussing on depression levels, and their ability to cope, adjust and adapt to their spinal cord injury. It also examined factors that may impact upon the quality of the relationship, including the injured persons' impairment level, and the provision of assistance with activities of daily living by the able-bodied partner. This research also investigated participants' attitudes towards sex, focussing on how estimates of the importance of orgasm and sexual satisfaction correlate with factors such as overall relationship satisfaction, attachment styles and the amount of physical assistance provided by the able bodied partner.

Some studies have shown that a spinal cord injury (SCI) decreases the chances of marriage among single people by about a third. Heinemann (1995) reported that only 12% of people with SCI's married within five years of their injury, a rate approximately one third lower than their able-bodied peers. In an earlier study, Brown & Giesy (1986)

compared a group of 251 people with spinal cord injuries with an age and sex matched group from the general population.

They found that among the spinal injured group there were 21.9% fewer males married, 13.2% more single males and 8.8% more divorced, separated or widowed males than in the general population. Similarly, there were 39.1% fewer married women, 14.5% more single women and 24.7% more divorced, separated or single women than in the general population. However, their research does not explain how unmarried people in relationships were classified. It also fails to allow for any particular characteristics of their participants – perhaps they were dealing with an unfortunately unattractive sample.

In order to eliminate the impact that individual characteristics may have on relationship selection, this research compared the number of people in relationships at the time of their injuries with the number in relationships at the time of their interviews. It is predicted that people with spinal cord injuries will be less likely to be in relationships when interviewed than they were at the time of their injuries. As they have more difficulty entering new relationships than the general population, it is expected that they will show higher levels of commitment to relationships (measured by the status of the relationship) than they did before they were injured.

1.8 Predictions.

The present research makes several predictions about the impact that intimate relationships have upon people with spinal cord injuries, and the impact that a spinal cord injury has on intimate relationships. Some of these predictions are based on the results of previous research, while others are original. Predictions are:

1. People with spinal cord injuries will be less likely to be in relationships when interviewed than they were at the time of their injuries. As they have more difficulty entering new relationships than the general population it is expected that they will show higher levels of commitment to relationships (in terms of the status of those relationships) compared with before their injuries.

2. People who are in intimate relationships will cope better with their spinal cord injury than those who are not. Also, those in relationships will be less likely to experience depression than single people with spinal cord injuries.

3. It is not expected that an individual's impairment level will be associated with their ability to cope with their injury. However, people with higher levels of impairment are expected to require more assistance with activities of daily living than their less disabled peers. People who receive assistance with activities of daily living from their partners will have lower levels of relationship satisfaction than participants who receive assistance from other sources.

4. People who are more satisfied with their relationships will cope better. It is also predicted that those with a more secure style will be more likely to be in relationships, will cope better with their injuries, and will be happier with their relationships (if they are in one). These participants are also expected to be satisfied with their sexual relationship, and to believe that achieving orgasm is not so important during sexual relations. In contrast, participants who are more anxious will be less likely to be in relationships, won't cope as well with their injuries and will be less satisfied with their relationships. These participants are expected to be more dissatisfied with their sexual relationship, and to believe that orgasms are an important part of sexual relations.

5. Finally it is predicted that, in accordance with the Interpersonal Exchange Model of Sexual Satisfaction (Lawrence & Beyers, 1995), when a spinal cord injury results in a decrease in sexual functioning an inequality of sexual rewards will emerge. This will cause the person with the spinal cord injury to become dissatisfied with their sexual relationship.

2. METHOD SECTION

2.1 Participants

Participants consisted of patients and former patients of the Burwood Spinal Unit who currently live in Christchurch, and had been injured for at least two years. Kester, Rothblum, Lobato and Milhous (1988) deemed this sufficient time to adjust to the initial impact of a spinal cord injury.

Letters requesting participation were sent to patients who were in contact with the spinal unit since 1990. One hundred and eighty five letters were posted, and 25 replies were received, 20 of whom were male. Participants responded in writing, by telephone or by e-mail. Ethical constraints (set by the health funding authority ethics committee) prevented any further contact with possible participants, so only people who responded to the initial letter were interviewed. It was intended to telephone the potential participants and obtain a sample of 60 participants, but the restrictions set by the ethics committee prevented this, which reduced the sample size to 25.

Participants ages ranged between 22 and 67 ($M=41$). Ages at the time of injury ranged from 12 to 62 ($M=29$). All of the participants identified themselves as New Zealand/European. Participants characteristics are displayed in Table 1.

Table 1
Characteristics of Participants (n=25)

Age at Injury		
Range	12-62	
Mean	29	
Age at Interview		
Range	22-67	
Mean	41	
Gender		
Male	20	80%
Female	5	20%
Education Level at Injury		
Secondary School	21	84%
Education below University	3	12%
University Degree	1	4%
Education Level at Interview		
Secondary School	13	52%
Education below University	8	32%
University	4	16%
Occupation at Injury		
Mother/Housewife	1	4%
Student	4	16%
Trade/Professional	8	32%
Other Occupations	12	48%
Occupation at Interview		
Mother/Housewife	1	4%
Student	2	8%
Volunteer	1	4%
Trade/Professional	3	12%
Other Occupations	3	12%
Beneficiary/Accident Compensation	15	60%

The number of participants who were working dropped dramatically between the two times, with 20 participants (80%) in paid employment at the time of their injury; and

6 (24%) in paid employment when interviewed. Although no participants reported being beneficiaries when they were injured, 15 (60%) listed this as their occupation when interviewed. However, many of the participants have taken the opportunity to increase their occupations since their injuries. Only 4 (16%) of the participants had post-secondary school education when they were injured, compared with 12 (48%) when interviewed.

2.1 Procedure

In order to minimise inconvenience for the participants they were all interviewed in their own homes. This helped to ensure that assistance was available for people with severe disabilities when it was required. A trained, experienced interviewer was employed for this study, and to ensure consistency the researcher was present for the first five interviews, and for one in every ten subsequent interviews. Some participants needed help with writing, and some partners were present at the interviews, which took approximately 30 minutes.

2.3 Research Measures

2.31 Relationship History Questionnaire. This questionnaire was designed to gather demographic and descriptive information about the participants. Participants were asked for their age, occupation, and educational level when injured and at the time of their interview. They were also asked if they were in an intimate relationship at both time periods, and to provide the status of those relationships (dating, cohabiting, engaged or married).

2.32 Perceived Relationship Quality. To measure the quality of each relationship the Perceived Relationship Quality Component Inventory (Fletcher, Simpson & Thomas, 2000) was employed. This inventory was preferred over alternative measures as it divides relationship quality into six distinct component categories: relationship satisfaction, commitment, intimacy, trust, passion, and love. This facilitated the study of the impact of a disability on relationship satisfaction. A check of the internal consistency between the factors produced a Cronbach's alpha of .94. Items were summed to produce one score.

2.33 Depression. To ensure that depression does not impact on overall relationship quality, participants completed the DASS Depression Scale. The DASS was preferred over the Beck Depression Inventory as the latter includes items such as weight loss, insomnia and irritability (Lovibond & Lovibond, 1995), all of which may be a result of the spinal cord injury, independent of any clinical depression. The DASS Depression Scale correlates 0.74 with the Beck Depression Inventory, and obtained an internal consistency coefficient (Cronbach's alpha) of .97.

2.34 Attachment Styles. Attachment styles were assessed in two ways, initially by employing the standard categorical measure developed by Hazan and Shaver (see Collins and Read, 1990). The Likert scales developed by Collins and Read (1990) were also used. These scales assess the three styles independently. Factor analyses of the Likert scale versions of these scales typically find they reduce to two factors: security and anxiety. Thus, in this study, we summed the scales to produce two scores representing security and anxiety. The Cronbach alphas obtained with the two scales were .58 and .61 respectively.

2.35 Physical and Emotional Support. Scales were employed to measure both the emotional and physical support that each participant in a relationship received from their partners. All participants estimated the amount of assistance that they require with activities of daily living on a 5 point scale, ranging from no assistance to full assistance. This scale was previously used in a study by Brown and Giesy (1986). Those

participants who were in relationships when interviewed then estimated the percentage of this assistance that was provided by their partners.

2.36 Coping. Participants were asked to rate the following questions using 7-point Likert scales with the end points 'Not Well' and 'Very Well': "How well have you coped with your spinal cord injury?"; "How well have you adjusted to your spinal cord injury"; and "How well have you adapted to your spinal cord injury". These answers were combined to give a general measure of coping. Correlations between the questions ranged from .81 to .95. The reliability was good, with a Cronbach's alpha coefficient of .94. Items were summed to produce one score.

2.37 Attitudes Towards Sex. Participants who were in a relationship when interviewed completed a questionnaire designed to assess attitudes towards sexual aspects of their relationships. Participants' attitudes were assessed using 7-point Likert scales. Sexual satisfaction was measured by asking participants "How satisfied are you with the amount of sex in your relationship"; "How satisfied are you with the physical quality of sex in your relationship"; and "How satisfied are you with the emotional quality of sex in your relationship". A reliability analysis between these questions produced a Cronbach's alpha of .93. Items were summed to produce one score.

Participants were also asked how important it was that they and their partners, reach orgasm. These answers were also combined to assess participant's perceptions of the

importance of orgasm in their sexual relationship. A reliability analysis produced an alpha coefficient of .65.

3. RESULTS

3.1 Descriptive Data

Table 2 shows means and standard deviations for the major variables. Results showed that, generally, participants scored highly on measures of coping, relationship satisfaction and sexual satisfaction, and lower on the depression measure.

Table 2

Means and Standard Deviations for the Major Variables (n=25)

	<u>M</u>	<u>SD</u>
Coping	5.81	1.37
Depression	0.42	0.50
Anxious Attachment	2.50	0.93
Secure Attachment	1.20	0.98
Assistance Required	2.88	1.39
Relationship Satisfaction (n=16)	5.81	1.37
Sexual Satisfaction (n=16)	4.42	2.11
Importance of Orgasm (n=16)	4.56	1.95

Note: All items were measured on a Likert scale ranging from 1 to 7, except for Depression (0-3) and Assistance Required (1-5).

3.11 Impairment Level. Table 3 shows descriptive data for the participants, who were classified based on their impairment levels. Participants were asked for their impairment levels rather than injury levels, as neurological recovery often occurs following a spinal cord injury. People with spinal cord injuries can be divided into three general classifications: tetraplegic, paraplegic and ambulant.

Table 3
Impairment Levels and Assistance Required (n=25)

Impairment Level		
Ambulant	1	4%
Paraplegia (T8 –S5)	6	24%
Low Tetraplegia (T1 – T7)	4	16%
Moderate Tetraplegia (C5 – C7)	10	40%
High Tetraplegia (C1 – C4/5)	4	16%
Assistance Required with Activities of Daily Living		
None	5	20%
Up to 1 Hour Daily	6	24%
2 to 4 Hours Daily	5	20%
5 to 8 Hours Daily	5	20%
<i>More than 8 Hours Only</i>	<i>4</i>	<i>16%</i>

Tetraplegics generally have four limbs affected by paralysis, but also have intact reflexes, including reflex erections. Four participants classified themselves as high tetraplegics, and are dependant on others for most activities of daily living. Ten participants classified themselves as moderate tetraplegics, with limited arm and hand motility. Four participants identified themselves as low tetraplegics. These individuals have full use of their upper limbs and also have intact reflexes. The six paraplegics in this sample have full use of their upper limbs. Finally, one participant described himself as ambulant. It is important to note that these are general descriptions only, as functions usually differ between individuals within each classification.

3.12 Assistance Required with Activities of Daily Living. Participants estimated the total number of hours of paid and unpaid assistance that they required each day with activities such as housework, showering and dressing. These reflected the impairment

levels of the participants, with fourteen participants requiring moderate to high levels of assistance.

3.2 Relationship Histories.

Categorical data relating to participants' relationship histories is shown in Table 4. In total, 17 participants (68%) were in relationships when they were injured, compared with 16 participants (64%) when interviewed. This was not predicted, as previous research had indicated that people were less likely to enter intimate relationships following a spinal cord injury than they were before they were injured. Six of the 17 relationships that existed at the time of injury were still in tact when the participants were interviewed.

Previous research (Heinemann, 1995; Brown & Giesy, 1986) has indicated that people with a spinal cord injury are less likely to be in a relationship than the general population. The present research found that 44% of participants were married, compared to 52% of the adult population in New Zealand at the time of the 1996 census (Statistics New Zealand, 1998). However, when rates for social marriages (that is, married and de facto relationships) are compared there is little difference between this sample (60%) and the general population (62%). Furthermore, this research revealed that for this sample there was no significant difference between the number of participants who were in

relationships at the time of their injury and the number in relationships at the time of their interviews.

Table 4
Relationship Histories (n=25)

Relationship Status when Injured		
Single	8	32%
Dating	5	20%
Cohabiting	4	16%
Engaged	1	4%
Married	7	28%
Relationship Status when Interviewed		
Single	9	36%
Dating	1	4%
Cohabiting	4	16%
Married	11	44%
Number of Relationships Since Injury		
Existing Relationship	6	24%
No New Relationships	2	8%
1	5	20%
2	3	12%
3	1	4%
4	5	20%
5	2	8%
6	1	4%

The levels of commitment which the participants invested into their relationships increased over time, with 12 (48%) of the participants cohabiting, engaged or married when injured and 16 (64%) showing these levels of commitment when interviewed. Only one participant was in a dating relationship when interviewed, compared with five when injured. This may be a result of the greater ages of the participants, which increased from an average of 29 at injury to 41 when interviewed.

3.3 Correlational Analyses: Whole sample

Table 5 shows correlational data using all the participants. Because of the small sample size employed in this research the power of this study was limited. For this reason, I will focus on correlations of .25 and above. Correlation coefficients were calculated among the major variables for all participants.

Table 5
Correlation Coefficients for the Whole Sample between the Major Variables (n=25)

Variable	1	2	3	4	5	6	7
1. Impairment Level	—	-.03	-.32	-.14	.33	.03	.76*
2. Coping		—	-.24	-.33	-.14	-.24	.28
3. Depression			—	-.07	.24	.03	-.26
4. Relationship Status				—	.38	-.05	.07
5. Anxious Attachment					—	-.49*	.17
6. Secure Attachment						—	-.16
7. Assistance Required							—

Note. Relationship status was coded 0 for participants who were in a relationship and 1 for those who were not.

* $p < .01$ (2-tailed).

3.31 Impairment Level. As expected, it was found that as the impairment levels of the participants increased so did the amount of assistance that they required with activities of daily living. These results also confirmed that people with higher levels of impairment were more likely to have an anxious attachment style than their less disabled peers. It was also found that participants with higher levels of impairment also scored higher on the coping measure than their less disabled counterparts. This was against predictions.

3.32 Depression. Also unexpected was the finding that levels of depression were higher among people with lower impairment levels. This is supported by the finding that depression is more likely for participants who required lower levels of assistance.

As already shown by previous research, people with spinal cord injuries who were in relationships coped better than those who were not. It was also found that people with an anxious attachment style were less likely to be in a relationship. The final correlation also confirmed that people with a more anxious attachment style were less likely to have a secure attachment style.

3.4 The Effect of Controlling for Impairment Level – Whole Sample.

Table 6 shows some of the same correlations, after controlling for impairment level, with coping and depression as the dependant variables. Results confirmed that

participants who were in relationships coped better than those who were not. They also revealed that as the amount of assistance participants required with activities of daily living increased, so did coping.

Two notable differences occurred in the results after controlling for impairment levels. First, anxious attachment style was now correlated with depression. Second, after controlling for impairment, depression was no longer more likely as the level of assistance required decreased. This suggests that depression is directly correlated with the impairment levels and is not related to participants' need for assistance.

Table 6

Correlation Coefficients for the Whole Sample between Coping and Depression and the Predictor Variables Controlling for Impairment Level (n=25)

	Coping	Depression
Relationship Status	-.35	-.01
Anxious Attachment	-.18	.42
Secure Attachment	-.23	-.12
Level of Assistance Required	.34	.06

Note. Relationship status was coded 0 for participants who were in a relationship and 1 for those who were not.

* $p < .01$ (2-tailed).

3.5 Correlational Analyses: Relationship Sample

Next, correlations were calculated only for participants who were in relationships at the time of the interviews (Table 7). As expected, it was found that assistance required was higher as the impairment (and disability) level increased. It was found that people

with lower levels of disability were more likely to score highly on the depression measure, duplicating the results found among the whole sample. Results also revealed that depression was more likely among people who received more assistance with activities of daily living from their partners. This was predicted, and supports the findings of Parker (1993), mentioned above.

Table 7

Correlation Coefficients for the Relationship Sample between Coping and Depression and the Predictor Variables (n=16)

	Coping	Depression
Impairment Level	-.01	-.51
Relationship Satisfaction	-.19	.05
Anxious Attachment	-.16	.18
Secure Attachment	-.24	-.27
Level of Assistance Required	-.04	-.24
% of Partner Assistance	.23	.77*

* p<.01 (2-tailed).

3.6 The Effects of Controlling for Impairment Level – Relationship Sample.

As with the whole sample, controlling for the effects of participants' impairment levels also altered some of the correlations within the relationship sample (Table 8). Controlling for impairment level revealed that participants with an anxious attachment style were less likely to cope well and more likely to become depressed than other participants.

Interesting changes also occurred among participants with a secure attachment style. After controlling for impairment level the negative correlation between a secure attachment style and depression almost disappeared, while the negative correlation between a secure attachment style and coping increased in size beyond the .25 threshold. This correlation, showing that a secure attachment style has a negative impact on coping, was unexpected.

Table 8

Correlation Coefficients for the Relation Sample between Coping and Depression and the Predictor Variables Controlling for Impairment Level (n=16)

	Coping	Depression
Relationship Satisfaction	-.20	.04
Anxious Attachment	-.49	.33
Secure Attachment	-.37	-.11
Level of Assistance Required	.03	.20
% of Partner Assistance	.23	.85*

* $p < .01$ (2-tailed).

An interesting change also occurred in the correlation between depression and the level of assistance required by the participants. Controlling for impairment level changed this from a negative correlation to a positive one, indicating that the more help that a participant in a relationship needed with activities of daily living the more likely they were to become depressed.

Controlling for impairment strengthened one of the most notable correlations produced by this research. That is, that participants that received assistance with activities of daily living from their partner's were significantly more likely to be depressed than participants who received their assistance from other sources.

3.7 Attitudes Towards Sex.

Correlations between participant's satisfaction with their sexual relationships, and their attitudes towards the importance of orgasm, with other major variables are shown in table 9. As expected, participants who were satisfied with their relationships were also satisfied with their sex lives. However, for this sample sexual satisfaction was not correlated with importance of orgasm.

Table 9

Correlation Coefficients between Sexual Satisfaction, Importance of Orgasm and the Predictor Variables Controlling for Impairment Level (n=16).

	<i>Sexual Satisfaction</i>	<i>Importance of Orgasm</i>
<i>Relationship Satisfaction</i>	<i>.74*</i>	<i>-.18</i>
<i>Anxious Attachment</i>	<i>.48</i>	<i>-.43</i>
<i>Secure Attachment</i>	<i>.54</i>	<i>-.36</i>
<i>Level of Assistance Required</i>	<i>-.11</i>	<i>.10</i>
<i>Partner Assistance</i>	<i>-.09</i>	<i>-.53</i>

* p<.01 (2-tailed).

It was predicted that participants with a secure attachment style would have high levels of sexual satisfaction and, because they are secure in their relationship, would not believe that it is important that they achieve orgasm. This was confirmed by the results.

On the other hand, it was expected that an anxious attachment style would result in dissatisfaction with the sexual relationship, and a belief that achieving orgasm was important for both themselves and their partners. However, results for participants with an anxious attachment style were similar to those with a secure attachment style. That is, an anxious attachment style was also highly correlated with sexual satisfaction, and a belief that achieving orgasm was not important.

Participants who received higher levels of physical assistance from their partners were less likely to report that achieving orgasm was important.

4. DISCUSSION

4.1 Summary of Results

The present research has produced some important results. First, it has showed that, for this sample, the numbers of those in relationships (with spinal cord injuries) was similar both to the general public and with the number in relationships before their injuries. However, participants who were in relationships invested higher levels of commitment to their partners compared with the situation before they were injured.

Second, it was found that depression was higher among people with lower levels of impairment. This effect was higher for participants who were in relationships. It was also found that people with higher levels of impairment were more likely to have an anxious attachment style.

Interesting results emerged when the effects of impairment levels were controlled for. For both the whole sample and the relationship sample, it was found that higher levels of depression were associated with a more anxious attachment style. Among the relationship sample it was also found that participants with a more anxious attachment style did not cope as well as their less anxious counterparts.

Participants in relationships who received more assistance with activities of daily living from their partners (compared to outside sources) were more likely to experience

depression. This effect remained after controlling for the impact of the disabled partner's impairment level.

Finally, it was found that participants, regardless of attachment style, were generally satisfied with their sexual relationships, and did not believe that achieving orgasms was important.

4.2 Evolutionary Explanations

Evolutionary psychology is based on the theories proposed by Darwin over a century ago. He suggested that all animals, including humans, adapt and evolve in ways that ensure that their genes are passed on to future generations. Darwin also proposed the theory of sexual selection – that individuals have mate preferences for particular qualities, and choose a mate based on these preferences. Evolutionary psychologists believe that this principal is equally applicable to the study of human behaviour as it is to the study of other species. So why are people with spinal cord injuries seen as viable relationship partners, despite their obvious physical shortcomings?

In a wide ranging study of 37 cultures, Buss (1989) investigated the characteristics that men and women look for in prospective mates. Both men and women rated 13 characteristics in order of preference. It was found that women prefer older men with good financial prospects, a high social status, industriousness and ambition. Men consistently ranked two characteristics higher than women: youth and physical

attractiveness. However, both sexes gave the highest ratings to mates who are kind, understanding, and loyal.

An individual's choice of mating strategy is contextual, and depends on the circumstances of the individual (Buss, 1998). The chosen strategy may alter depending on factors such as the sex ratio, the alternatives available, and cultural norms. In New Zealand, people with spinal cord injuries are usually financially secure. Those who are not working receive either accident compensation or a disability benefit, both of which are available until retirement age. Thus, a person with a disability is able to provide a stable, reliable income. This financial security may serve to increase the attractiveness of a New Zealand male with a spinal cord injury, compared to those from other countries.

Moreover, "disabled" does not equal "unhealthy". A spinal cord injury is not a hereditary condition that can be passed along through the genes. The condition does not deteriorate with time and, with modern medical techniques the expected life span of a person with a spinal cord injury is only slightly less than that of the able-bodied. A spinal cord injury also does not prevent people from having children, although it may make it considerably more expensive. Modern fertilisation techniques mean that men who were formerly unable to father children are now viable prospects as mates.

Men with spinal cord injuries may use a process evolutionary psychologists call the 'nice guy' strategy; namely, individuals who are not heavily endowed with one virtue (such as attractiveness or physical prowess) may compensate by developing their

personality and behaviour to emphasise other characteristics, such as commitment, sensitivity and caring (Mealey, 2000). Instead of looking for several short – term dating partners the male presents himself as a potential father and husband. This is reflected by the results of the present study, which found that the levels of commitment which the participants invested into their relationships changed, with 12 (48%) of the participants cohabiting, engaged or married when injured and 15 (60%) showing these levels of commitment when interviewed. However, caution should be exercised in interpreting this finding, given the ages of the participants, which increased from an average of 29 at injury to 41 when interviewed.

4.4 Equity Theory.

The finding that, among participants in relationships, depression was more likely among people with lower levels of impairment was unexpected. One possible explanation for this finding is suggested by equity theory. This theory suggests that participants in relationships weigh their own contributions and benefits in relationships against their partners. People are most satisfied with the relationship when the cost benefit ratio is similar for both partners. Equity theory predicts that where there is an imbalance, both partners will be unhappy: the under-benefited person will feel cheated and deprived and the over-benefited partner will feel guilty and uncomfortable.

In the context of the current research, equity theory may explain why people with lower levels of injury are more likely than others to experience depression. Perceived

equity is an individual construct, and is determined by the way that each partner interprets the particular circumstances of their relationship. People with high levels of impairment may become used to being unable to participate fully in many aspects of their lives. However, people with low levels of impairment such as paraplegics are usually independent in most aspects. It is possible that they feel especially unable to participate completely in their relationship, where people with higher levels of injury may not perceive an inequity.

Equity theory may also explain why participants who received assistance from their partner experienced higher levels of depression. When a person with a spinal cord injury receives physical assistance from their partner this may upset the perceived equity, leading to depression for the disabled partner.

Equity theory also predicts that relationships that began after the spinal cord injury would be more likely to endure, as the disability would have been factored into each partner's equation from the beginning. Indeed, of 16 relationships at the time of injury, 7 ended within 12 months.

4.5 Social Support

The results of the present research showed that people with spinal cord injuries who were in intimate relationships coped better with their injuries than their single peers. This was predicted by previous research, and may reflect the benefits that social support

from a spouse has for people dealing with illness or injury. Holicky and Charlifue (1999) investigated the impact of spousal support upon people with spinal cord injuries as they age. They found that married individuals scored better than their non-married peers on measures of depression, life satisfaction, psychological well-being and perceived quality of life.

Thoits (1986) suggested that social support and coping are analogous, consisting of similar behaviours. The difference between the two processes is that while coping is initiated by the individual, social support is initiated by others. McColl, Lei and Skinner (1995) elaborated upon this theory, and suggested that the processes are complementary. They investigated coping and social support among people with spinal cord injuries. Factor analysis revealed that social support consists mainly of emotional support, while coping consisted mainly of perception and problem-oriented coping.

This may suggest why the present study, as well as previous research, found that people with spinal cord injuries who were in relationships coped better than those who were not. The emotional support that they receive from their spouse complements their individual coping strategies, enhancing their ability to cope with their spinal cord injury in general.

4.6 Sexual Satisfaction

In a study of sexual adjustment following spinal cord injury Kreuter, Sullivan and Siosteen (1996) concluded that psychosocial rather than physical factors were important for a satisfying sexual relationship. This was supported by the present study, which generally showed that participants did not believe that achieving orgasm was important for sexual satisfaction for either themselves or their partners.

The Interpersonal Exchange Model of Sexual Satisfaction proposes that sexual satisfaction is a function of rewards and costs from a sexual relationship, where satisfaction is greater if rewards exceed costs and an interpersonal equality of rewards and costs is seen to exist between partners (Lawrence & Beyers, 1995). This model would suggest that when one partner has a disability resulting in a decrease in sexual functioning, especially the inability to achieve orgasm, an inequality in interpersonal rewards would exist during sexual relations. However, relatively little perceived inequity would have existed for the participants in this study as, generally, they did not believe that it was important that either partner achieved orgasms.

4.7 Limitations of the present study and directions for further research

The biggest limitation of this study was the sample size. The limited number of participants made it difficult to get significant results. The small sample size prevented some pivotal comparisons from being made within the relationship group. It may have

proven beneficial, for example, to compare participants who were still in their pre-injury relationships with those who formed relationships after their injuries. A larger sample would also have made it possible to investigate gender differences.

A control group would also have enabled comparison with the general population, particularly for the questions related to sexual relationships. The discovery that orgasm is not related to sexual satisfaction among this population requires further investigation. It would also be useful to discover if the able-bodied partners share this view.

It would also be valuable to investigate the able-bodied partner's attitudes towards their relationships in general. When does an able-bodied person begin to see someone with a spinal cord injury as a prospective relationship partner? Is it ever 'love at first sight', or does attraction grow with familiarity?

What type of relationship strategies do people with spinal cord injuries and their partners employ? Evolutionary psychology would suggest that this group would pursue a long-term mating strategy.

The finding that people who receive more assistance with activities of daily living from their partners are less likely to rate their partner's orgasms as important warrants further investigation. Is this limited to orgasms, or do they feel that it is not important that their partners experience any sexual satisfaction? How do they rate their partners on other aspects of relationship satisfaction?

Finally, it is important that future research investigates the impact that receiving assistance with activities of daily living from a relationship partner has upon the person with the spinal cord injury. The present research found that receiving more assistance from the able-bodied partner was highly correlated with increased depression. Previous research has already found that providing cares leads to depression for the able-bodied partner (Weitzenkamp, Gerhart, Charifue, Whiteneck, & Savic, 1997). It is important that newly-disabled people are made aware of these findings, so that they can minimise the strain on their relationships at a time of immense stress.

4.8 Conclusion

With the high incidence of spinal cord injuries in our community it is important that as much information as possible is gathered to ease the transition to living with a disability for both the injured persons and their loved ones. Of all of the findings of this research, perhaps the most telling is that nearly half of the existing relationships lasted less than one year after the accident. In fact, of the ten relationships that survived more than 12 months post-injury six were still continuing at the time of the interviews.

Health professionals need to be aware of these findings so that interventions can be implemented to target at-risk individuals. Perhaps relationship counselling should be made immediately made available for couples where one partner has a spinal cord injury. Couples should be advised that if an able-bodied person provides excessive amounts of care for their injured partner that it may lead to depression for both partners. Research is

also needed to find out why people with lower levels of impairment are more prone to depression. This is an important area for future research, both in terms of its clear practical applications and in terms of understanding the psychology of intimate relationships.

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APPENDIX A

The Impact of Spinal Cord Injuries on Intimate Relationships

Statement of Consent:

I have read and I understand the information sheet dated 5/04/2000 for volunteers taking part in the study designed to investigate the impact of spinal cord injuries on intimate relationships. I have had the opportunity to discuss this study. I am satisfied with the answers I have been given.

I have had time to consider whether to take part. I understand that taking part in this study is voluntary (my choice) and that I may withdraw from this study at any time.

I understand that my participation in this study is confidential and that no material that could identify me will be used in any reports on this study.

I wish to receive a copy of the results.

YES / NO

I _____ hereby consent to take part in this study.

Date:

Signature:

The following must be completed for people who are unable to sign this consent form:

Signature of witness:

Name of witness:

Relationship History Questionnaire.

- 1) What is your gender? M / F

 - 2) What is your age now? _____

 - 3) What was your age at the time of your injury? _____

 - 4) What is the functional level of your injury? _____

 - 5) What ethnic group do you primarily identify with? _____

 - 6) What was your occupation at the time of your injury? _____

 - 7) What is your occupation now? _____

 - 8) What was your education level at the time of your injury? _____
- No Qualifications, School Certificate, Sixth Form Cert., Higher School Cert.,
Polytech Diploma , Polytech Degree, University Diploma, University Degree.
- 9) What is your educational level now? _____

Note: Some of the questions below may not be applicable to you. If so, then simply leave them blank. You do not have to answer any questions you do not wish to answer.

- 10) Were you in an intimate relationship at the time of your injury? Yes / No

- 11) If you answered Yes to Q 9, what was the status of this relationship at this time?
 - With opposite sex/with same sex
 - Dating
 - Living together
 - Married

- 12) If you answered Yes to Q 9, are you still with the same partner? Yes/No
- 13) How many intimate relationships have you been in since your injury (Do not include any relationship you may have been in at the time of your injury).
- 14) Are you in an intimate relationship at the current time? Yes / No
- 15) If you answered Yes to Q 12, What is the current status of this relationship?
- With opposite sex/with same sex
 - Dating
 - Living together
 - Married
- 16) If you were in a relationship at the time of your injury, but are no longer in this relationship, how long after the injury did your relationship break up?
- _____Yrs, _____Mths
- 17) Please list up to ten factors to explain why your relationship at the time of the injury either a) broke up or b) did not break up and continues today.

Relationship Measure

If you are currently in an intimate relationship please complete the followings scales, circling ONE number in each scale.

1. How satisfied are you with your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

2. How content are you with your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

3. How happy are you with your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

4. How committed are you to your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

5. How dedicated are you to your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

6. How devoted are you to your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

7. How close is your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

8. How intimate is your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

9. How connected are you to your partner?

Not at all 1 2 3 4 5 6 7 Extremely

10. How much do you trust your partner?

Not at all 1 2 3 4 5 6 7 Extremely

11. How much can you count on your partner?

Not at all 1 2 3 4 5 6 7 Extremely

12. How dependable is your partner?

Not at all 1 2 3 4 5 6 7 Extremely

13. How passionate is your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

14. How lustful is your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

15. How sexually intense is your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

16. How romantic is your relationship?

Not at all 1 2 3 4 5 6 7 Extremely

17. To what extent do you and your partner go out of your way to make each other feel special?

Not at all 1 2 3 4 5 6 7 Extremely

18. To what extent do you and your partner surprise one another with small gifts, notes, cards, flowers, special treats, etc.

Not at all 1 2 3 4 5 6 7 Extremely

19. How much do you love your partner?

Not at all 1 2 3 4 5 6 7 Extremely

20. How much do you adore your partner?

Not at all 1 2 3 4 5 6 7 Extremely

21. How much do you cherish your partner?

Not at all 1 2 3 4 5 6 7 Extremely

Self-Perception Scale

Please read each statement and circle a number 0, 1, 2 or 3, which indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement. For the physical symptoms listed below (e.g., shaking, faintness, breathlessness), please ignore any occurrences that were directly caused by your spinal cord injury.

The rating scale is as follows:

- 0. Did not apply to be at all
- 1. Applied to me to some degree, or some of the time
- 2. Applied to me a considerable degree, or good part of the time
- 3. Applied to me very much, or most of the time

1.	I found myself getting upset by quite trivial things	0	1	2	3
2.	I just couldn't seem to get going	0	1	2	3
3.	I had a feeling of faintness	0	1	2	3
4.	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5.	I felt sad and depressed	0	1	2	3
6.	I found it hard to calm down	0	1	2	3
7.	I perspired noticeably (e.g. hands sweaty) in the absence of high temperatures or physical exertion.	0	1	2	3
8.	I found myself getting impatient when I was a delayed in anyway (e.g., lifts, traffic lights, being kept waiting)	0	1	2	3
9.	I found myself in situations which made me so anxious I was most relieved when they ended	0	1	2	3
10.	I tended to over react to situations	0	1	2	3
11.	I found myself getting upset rather easily	0	1	2	3
12.	I felt that I had nothing to look forward to	0	1	2	3

- | | | | | | |
|-----|--|---|---|---|---|
| 13. | I couldn't seem to experience any positive feelings at all | 0 | 1 | 2 | 3 |
| 14. | I found that I was very irritable | 0 | 1 | 2 | 3 |
| 15. | I was aware of dryness in my mouth | 0 | 1 | 2 | 3 |
| 16. | I felt that I had lost interest in just about everything | 0 | 1 | 2 | 3 |
| 17. | I could see nothing in the future to be hopeful about | 0 | 1 | 2 | 3 |
| 18. | I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat) | 0 | 1 | 2 | 3 |
| 19. | I felt scared without any good reason | 0 | 1 | 2 | 3 |
| 20. | I felt that life wasn't worthwhile | 0 | 1 | 2 | 3 |
| 21. | I felt that I was rather touchy | 0 | 1 | 2 | 3 |
| 22. | I felt that I was using a lot of nervous energy | 0 | 1 | 2 | 3 |
| 23. | I couldn't seem to get enough enjoyment out of the things I did | 0 | 1 | 2 | 3 |
| 24. | I had a feeling of shakiness | 0 | 1 | 2 | 3 |
| 25. | I felt downhearted and blue | 0 | 1 | 2 | 3 |
| 26. | I found it difficult to work up the initiative to do something | 0 | 1 | 2 | 3 |
| 27. | I found it hard to wind down | 0 | 1 | 2 | 3 |
| 28. | I was intolerant of anything that kept me from getting on with what I was doing | 0 | 1 | 2 | 3 |
| 29. | I had difficulty in swallowing | 0 | 1 | 2 | 3 |
| 30. | I feared that I would be "thrown" by some trivial but unfamiliar task | 0 | 1 | 2 | 3 |
| 31. | I felt that I was pretty worthless | 0 | 1 | 2 | 3 |
| 32. | I was unable to become enthusiastic about anything | 0 | 1 | 2 | 3 |

- | | | | | | |
|-----|---|---|---|---|---|
| 33. | I was worried about situations in which I might panic and make a fool of myself | 0 | 1 | 2 | 3 |
| 34. | I was in a state of nervous tension | 0 | 1 | 2 | 3 |
| 35. | I felt I was close to panic | 0 | 1 | 2 | 3 |
| 36. | I felt I wasn't much as a person | 0 | 1 | 2 | 3 |
| 37. | I found it difficult to relax | 0 | 1 | 2 | 3 |
| 38. | I felt terrified | 0 | 1 | 2 | 3 |
| 39. | I experienced trembling (e.g., in the hands) | 0 | 1 | 2 | 3 |
| 40. | I found myself getting agitated | 0 | 1 | 2 | 3 |
| 41. | I felt that life was meaningless | 0 | 1 | 2 | 3 |
| 42. | I found it difficult to tolerate interruptions to what I was doing | 0 | 1 | 2 | 3 |

Relationship Styles Measure.

Please indicate which of the following best describes your feelings by placing a tick in ONE of the spaces provided.

_____ I find it relatively easy to get close to others and am comfortable depending on them and having them depend on me. I don't offer worry about being abandoned or about someone getting close to me.

_____ I am somewhat uncomfortable being close to others; I find it difficult to trust them, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, love partners want to be more intimate than I feel comfortable being.

_____ I find that others are reluctant to get as close as I would like. I often worry that my partner doesn't really love me or won't want to stay with me. I want to merge completely with another person, and this desire sometimes scares people away.

Relationship Scale.

Please circle a number to indicate how the following questions best describe your feelings, on a scale ranging from *not at all characteristic (1)* to *very characteristic (7)*.

1) I find it difficult to allow myself to depend on others.

Not At All 1 2 3 4 5 6 7 Very Characteristic

2) People are never there when you need them.

Not At All 1 2 3 4 5 6 7 Very Characteristic

3) I am comfortable depending on others.

Not At All 1 2 3 4 5 6 7 Very Characteristic

4) I know that others will be there when I need them.

Not At All 1 2 3 4 5 6 7 Very Characteristic

5) I find it difficult to trust others completely.

Not At All 1 2 3 4 5 6 7 Very Characteristic

6) I am sure that I can always depend on others to be there when I need them.

Not At All 1 2 3 4 5 6 7 Very Characteristic

7) I do not often worry about being abandoned.

Not At All 1 2 3 4 5 6 7 Very Characteristic

8) I often worry that my partner does not really love me.

Not At All 1 2 3 4 5 6 7 Very Characteristic

9) I find others are reluctant to get as close as I would like.

Not At All 1 2 3 4 5 6 7 Very Characteristic

10) I often worry my partner will not want to stay with me.

Not At All 1 2 3 4 5 6 7 Very Characteristic

11) I want to merge completely with another person.

Not At All 1 2 3 4 5 6 7 Very Characteristic

12) My desire to merge sometimes scares people away.

Not At All 1 2 3 4 5 6 7 Very Characteristic

13) I find it relatively easy to get close to others.

Not At All 1 2 3 4 5 6 7 Very Characteristic

14) I do not often worry about someone getting too close to me.

Not At All 1 2 3 4 5 6 7 Very Characteristic

15) I am somewhat uncomfortable being close to others.

Not At All 1 2 3 4 5 6 7 Very Characteristic

16) I am nervous when anyone gets too close.

Not At All 1 2 3 4 5 6 7 Very Characteristic

17) I am comfortable having others depend on me.

Not At All	1	2	3	4	5	6	7	Very Characteristic
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18) Often, love partners want me to be more intimate than I feel comfortable being.

Not At All	1	2	3	4	5	6	7	Very Characteristic
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Relationship Questionnaire.

Please circle a number to indicate how the following questions best describe your feelings.

1) How much did your partner give you information, suggestions, and guidance over the last month that you found helpful?

Not At All 1 2 3 4 5 6 7 Extremely

2) How reliable is your partner? (Is your partner there when you need him/her?)

Not At All 1 2 3 4 5 6 7 Extremely

3) How much does your partner boost your spirits of when you feel low?

Not At All 1 2 3 4 5 6 7 Completely

4) How much does your partner make you feel he/she cares about you?

Not At All 1 2 3 4 5 6 7 Completely

5) How much do you feel you can confide in your partner?

Not At All 1 2 3 4 5 6 7 Completely

Coping Questionnaire.

Please circle a number to indicate how the following questions best describe your feelings, on a scale ranging from **Not Well (1)** to *Very Well (7)*.

1) How well have you coped with your spinal cord injury?

Not Well 1 2 3 4 5 6 7 Very Well

2) How well have you adjusted to your spinal cord injury?

Not Well 1 2 3 4 5 6 7 Very Well

3) How well have you adapted to your spinal cord injury?

Not Well 1 2 3 4 5 6 7 Very Well

How much assistance (paid and unpaid) do you need with Activities of Daily Living?
Please circle the appropriate number on the scale provided.

- 1 Full assistance.**
- 2 Much assistance, up to 8 hrs a day.**
- 3 Moderate assistance, up to 4 hrs a day.**
- 4 Minimum assistance, up to 1 hr a day.**
- 5 No assistance.**

How much (if any) of the assistance estimated above is provided by your partner?
Please circle to indicate an approximate percentage.

None 10% 20% 30% 40% 50% 60% 70% 80% 90% All

Relationship Questionnaire.

Only complete this questionnaire if you are in an intimate relationship **at the present time**. Please circle a number to indicate how the following questions best describe your feelings, on a scale ranging from *not at all (1)* to *extremely (7)*.

1) How satisfied are you with the amount of sex in your relationship?

Not At All 1 2 3 4 5 6 7 Extremely

2) How satisfied are you with the physical quality of your sexual relationship?

Not At All 1 2 3 4 5 6 7 Extremely

3) How satisfied were you with the physical quality of your sexual relationship before your spinal cord injury?

Not At All 1 2 3 4 5 6 7 Extremely

4) How satisfied are you with the emotional quality of your sexual relationship?

Not At All 1 2 3 4 5 6 7 Extremely

5) How satisfied were you with the emotional quality of your sexual relationship before your spinal cord injury?

Not At All 1 2 3 4 5 6 7 Extremely

6) How important to you is it that your partner achieves orgasm?

Not At All 1 2 3 4 5 6 7 Extremely

7) How important is it to you that you achieve orgasm?

Not At All 1 2 3 4 5 6 7 Extremely

APPENDIX B

3 April, 2000

THE IMPACT OF SPINAL CORD INJURIES ON INTIMATE RELATIONSHIPS

Dear

We would like to take this opportunity to introduce Robert Smith. Robert is a C 5/6 tetraplegic, and has been studying psychology since 1992. He currently has a Bachelor of Science degree, and has an interest in Social Psychology (the study of everyday behaviour). You are invited to participate in the research project *The Impact of Spinal Cord Injuries on Intimate Relationships*, which is being conducted by Robert as part of a Master of Science (psychology) degree at the University of Canterbury.

The aim of this project is to investigate the effects that a disabling accident has on a person's relationship styles, and on their attitudes towards intimate relationships. Please read the attached letter for further information. Your participation in this study is entirely voluntary (your choice). You are not required to take part in this study, and if you choose not to participate it will not affect any future care. If you do agree to take part you are free to withdraw at any time without having to give a reason.

Yours sincerely

Dr R H Acland
Consultant
Burwood Spinal Unit

John Quirke
Clinical Psychologist
Burwood Spinal Unit

APPENDIX C

5 April 2000

The Impact of Spinal Cord Injuries on Intimate Relationships

Dear

You are invited to participate in the research project *The Impact of Spinal Cord Injuries on Intimate Relationships*, which I am conducting as part of a Master of Science (psychology) degree at the University of Canterbury.

The aim of this project is to investigate the effects that a disabling accident has on a person's relationship styles, and on their attitudes towards intimate relationships. I believe that this is an area that has been neglected by researchers in the past. This research should contribute to our knowledge of the impact of spinal cord injuries, and aid the way that therapists and rehabilitation staff work with people with spinal cord injuries and their families in the future.

If you agree to participate a trained researcher will come to your home and assist you to complete a set of questionnaires about your relationship history, your attitudes towards relationships, your attachment styles, your attitudes towards sex, and your social support network. It is expected that it should take less than 30 minutes in total to complete these questionnaires.

Although this research is interested in your personal attitudes and beliefs as an individual, you may wish to have a representative from your family, culture, or community present at the interview. Please let me know if you need me to arrange an interpreter or representative.

The results of the project may be published, but you may be assured of the complete confidentiality of data gathered in this investigation: the identity of participants will not be made public. To ensure anonymity and confidentiality, no material that could identify you will be used in any reports on this study.

This project has been reviewed by the Canterbury Ethics Committee and the University of Canterbury Ethics Committee. I would be pleased to discuss any concerns you may have about participation in the project, and can be contacted on 366 7001 ext. 7173, or by e-mail at rcs31@student.canterbury.ac.nz. Alternatively, if you have any queries or concerns regarding your rights as a participant in this study, you may wish to contact a Health and Disability Services Consumer Advocate, telephone 377 7501.

If you would like to participate in this project please contact me to arrange an interview at a time which is convenient to you. You can contact me by phone, e-mail or by supplying your name and phone number and returning this page in the postage-paid envelope provided. Your prompt reply would be appreciated.

Yours Sincerely,

Robert Smith.

Name:

Phone Number:

Most convenient time to phone you: